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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,586	02/06/2004	Shunpei Yamazaki	740756-2707	2329
22204	7590	12/13/2005	EXAMINER	
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			NGUYEN, THANH T	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/772,586	YAMAZAKI, SHUNPEI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thanh T. Nguyen	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 and 19-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/23/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse of specie III, claims 13-18 in the reply filed on 9/22/05 is acknowledged. The traversal is on the ground(s) that semiconductor device and display device are used together, and a method for producing a semiconductor device also can be used in a method for producing a display device using a semiconductor device. This is not found persuasive because species I, III (claims 1-6, 13-18) are drawn to a method for producing a semiconductor device while species II, IV (claims 7-12, 19-24) are drawn to a method for using the semiconductor device. Producing a device and using a device are two distinct inventions. Claims 7-12, 19-24 would require further search and for the reason of the last Office Action.

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119  
(a)-(d).

***Information Disclosure Statement***

The information disclosure statement filed 2/23/05 has been considered.

***Oath/Declaration***

Oath/Declaration filed on 8/4/04 has been considered.

***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation “linear plasma” in claims 1-3, 13-15 is indefinite because it is unclear what is “linear plasma”. For the rejection of the claims, examiner interprets the limitation as “etching the layer by using plasma generator”. It is suggested to delete the limitation or provide the clarity of the term.

Claims 5, 17 are objected because there is a typographical error in line 2 of claims 5, 17. It is suggested to delete “when” after “wherein”.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa (U.S. Patent Publication No. 2003/0132987) in view of Mori et al. (JP Patent No. 2000/169977).

Referring to figures 1-67, Ogawa teaches a method for producing a semiconductor device comprising:

forming wiring using g. first solution ejector for ejecting a conductive material (see paragraph# 107, 432),

forming a resist mask on the wiring using a second solution ejector (see paragraphs# 109, 327, 434), and

etching the wiring using an atmosphere plasma device having linear plasma generator using the resist mask as a mask (see paragraph# 329, figures s1-s2).

Regarding to claims 4, 16, the solution ejector has one or more of solution ejection ports (57, paragraph# 210).

Regarding to claims 5, 17, a wiring material, or a resist, or the like is ejected using the solution ejector a substrate is heated (see paragraph# 327).

However, the reference does not teach etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma generators, and etching the wiring layer at the atmospheric pressure or near-atmospheric pressure

Mori et al. teaches etching the wiring (metal layer) by using high frequency plasma under atmospheric pressure (see abstract, meeting claims 1-3, 5, 13-15, 18).

Therefore, it would have been obvious to a person of ordinary skill in the requisite art at the time of the invention was made would etching the wiring layer by using high frequency

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plasma under atmospheric pressure in process of Ogawa as taught by Mori et al. because the process would enable to etch the metal easily.

It would be obvious to one ordinary skill in the art to etch the wiring layer using a plurality of linearly-arranged plasma generators with the same process as using in a linearly-arrange plasma generators to etch the wiring layer since it is well-known in the art to repeat the same process for multiple effect. See St. Regis paper, Co. V. Bemis Co. Inc. 193 USPQ 8, 11 (7th circuit 1977) (meeting claims 13-15).

Therefore, it would have been obvious to a person of ordinary skill in the requisite art at the time of the invention was made would etch the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma generators in process of Ogawa because the process would provide a uniform etching in the wiring layer.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Nguyen whose telephone number is (571) 272-1695, or by Email via address Thanh.Nguyen@uspto.gov. The examiner can normally be reached on Monday-Thursday from 6:00AM to 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, can be reached on (571) 272-1702. The fax phone number for this Group is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956 (See **MPEP 203.08**).

A handwritten signature in black ink, appearing to read 'Thanh', with a stylized flourish at the end.

Thanh Nguyen  
Patent Examiner  
Patent Examining Group 2800

TTN